ABSTRACT

To provide a DC-DC converter allowing miniaturization of a voltage transformer without fear of reducing conversion efficiency due to saturation of the transformer and allowing enhancement of conversion efficiency by suppressing switching loss. An LC resonance circuit 3 is inserted on the secondary side of a transformer 1. When driving means 4 alternately turn on and off a pair of switching means 2-1, 2-2, an output is obtained on the secondary side via the transformer 1. A current transformer 5 for current detection, a current value detection portion 6 and a current value comparison portion 7 detect a difference between each resonance current value per half cycle due to the operation of the LC resonance circuit 3. In response to its result, the drive means 4 regulate automatically on-state duty ratio of the switching means 2-1, 2-2 so as to align the resonance current values per half cycle.